

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
03 March 2022 (03.03.2022)



(10) International Publication Number
WO 2022/047089 A1

- (51) **International Patent Classification:**
A61L 27/36 (2006.01) *A61L 27/54* (2006.01)
- (21) **International Application Number:**
PCT/US2021/047838
- (22) **International Filing Date:**
27 August 2021 (27.08.2021)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/071,635 28 August 2020 (28.08.2020) US
17/411,718 25 August 2021 (25.08.2021) US
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- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.
- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) **Title:** NERVE GRAFTS AND METHODS OF PREPARATION THEREOF

(57) **Abstract:** Tissue grafts with reduced regenerative potential, methods of preparing such grafts, and related kits and methods of treatment are described. The method may include treating tissue with a digestion solution comprising trypsin, alpha-chymotrypsin (ACT) and optionally ethylenediaminetetraacetic acid (EDTA) to substantially remove one or more susceptible proteins from the tissue. The method may also include washing the treated tissue with a buffer solution and/or with a serine-containing serum. Nerve grafts prepared according to the disclosed methods may inhibit, or lessen (e.g., provide for reduced) neuroma formation and/or axonal outgrowth after implantation.

WO 2022/047089 A1